

AMENDMENTS TO THE CLAIMS:

The present Amendment has been prepared in accordance with a revised format established by the U.S. Patent and Trademark Office, as permitted in the Pre-OG Notice entitled "Amendments in a Revised Format Now Permitted."

Please cancel Claims 61-67 without prejudice or disclaimer of the subject matter presented therein.

Please amend Claims 68-70, and add new Claims 71-74, as follows. In accordance with the revised amendment format, all claims are presented below.

1-67 (Cancelled)

68. (Currently Amended) A process for crystal growth by using a crystal growth apparatus comprising a crucible for holding a crystal material, a heating means which is capable of forming at the ~~a~~ periphery of the crucible a temperature gradient within a temperature range including a melting point of the crystal material, a supporting means for supporting a center bottom of the crucible, a cooling means provided at the supporting means, and a temperature detecting means provided at the bottom of the crucible for detecting a temperature distribution within a plane of cross section across a first plane at the bottom of the crucible, the process comprising the steps of:

detecting the temperature distribution within a plane of cross section across said first plane of the crucible; and

controlling the heating means and the cooling means such that in the detected temperature distribution within a plane of a cross section across said first plane of the crucible, a temperature almost at a center portion of said first plane of the crucible is minimized in the cross section.

69. (Currently Amended) The process according to ~~claim~~ claims 68, 71, 72, 73, or 74, wherein ~~cooling by~~ said step of controlling the cooling means is effected by adjusting a flow rate of cooling medium flowed into the cooling means.

70. (Currently Amended) The process according to ~~claim~~ claims 68, 71, 72, 73, or 74, wherein the temperature detecting means ~~is~~ includes a plurality of thermocouples ~~provided in cross section of the crucible and~~ said step of detecting the temperature distribution is effected by said thermocouples.

71. (New) The process according to claim 68, wherein the interior of the crucible is divided into plural layers by a plurality of disks formed across respective cross-sections of the crucible, wherein the temperature detecting means is further provided in the disks, and wherein said process further comprises the step of detecting a temperature distribution across said respective disks.

72. (New) The process according to claim 71, wherein each disk has an opening at almost its center.

73. (New) A process for crystal growth by using a crystal growth apparatus comprising a crucible for holding a crystal material, the crucible being divided into plural layers by a plurality of disks formed across respective cross-sections of the crucible, the crystal growth apparatus further comprising a heating means which is capable of forming at a periphery of the crucible a temperature gradient within a temperature range including a melting point of the crystal material, a supporting means for supporting a center bottom of the crucible, a cooling means provided at the supporting means, and a

temperature detecting means provided in at least one of the disks for detecting a temperature distribution across that disk, the process comprising the steps of:

detecting the temperature distribution across said at least one of said disks; and

controlling the heating means and the cooling means such that in the detected temperature distribution across said at least one disk, a temperature almost at a center portion thereof is minimized.

(A)

74. (New) The process according to claim 73, wherein each disk has an opening at almost its center.